

COUNTRY ANALYSIS BRIEFS

Cote d'Ivoire

Last Updated: July 2008

Côte d'Ivoire has a growing oil industry and is attracting foreign company interest.

Background

Côte d'Ivoire's oil industry started to take off in 2001 during a period of civil war. By 2007, oil exports represented 28 percent of the government's export revenues, surpassing cocoa and coffee, the country's traditional export commodities. The majority of Côte d'Ivoire's electricity is generated through natural gas-powered stations with hydroelectricity accounting for around 20 percent. While gradually becoming a net oil exporter, International Energy Agency (IEA) data indicates that more than half of domestic energy needs are met by combustible renewables and waste, mainly in the form of biomass.



There are several foreign companies participating in the Ivorian oil industry and, as of May 2008, Côte d'Ivoire became a candidate country for the Extractive Industries Transparency Initiative (EITI). As such, it has two years to become compliant with the [EITI criteria and undergo validation](#). Membership could further boost foreign investment in the oil, natural gas and mining sectors.

Oil

The majority of Côte d'Ivoire's oil wells are located offshore.

According to estimates published by the *Oil and Gas Journal (OGJ)* Côte d'Ivoire had 100 million barrels of proven crude oil reserves as of January 2008—the vast majority of which are located offshore. With current levels of foreign interest and recent 3-D seismic modeling, these reserve estimates could increase in the near term.

Production

Oil production increased from around 15,000 barrels per day (bbl/d) in 2002 reaching approximately 62,000 bbl/d in 2006. Production problems at the Baobab field constrained oil production in 2007 to almost 52,000 bbl/d. Production is expected to increase to 70,000 bbl/d by 2009 following repairs at three of the five shut-in wells at the Baobab field. According to IHS Energy, the three main oil producing fields in 2007 were Espoir (28,060 bbl/d), Baobab (21,115 bbl/d) and Lion (1,850 bbl/d) with some additional condensate production from Foxtrot totaling approximately 550 barrels of oil equivalent per day (boe/d).

Refining and Downstream

Côte d'Ivoire currently has one refinery, the SIR (Société Ivoirienne de Raffinage) with a capacity of 65,000 bbl/d located in Abidjan. The refinery receives crude oil from West African and other countries then exports products to neighboring countries. An oil pipeline connects the SIR refinery to the Lion and Panther fields. The state currently owns 47.3% of SIR—other partners include

Burkina Faso, Total, Shell, ExxonMobil and Chevron. A petroleum product depot, adjacent to SIR, stores petroleum products for domestic use as well as for export. Products are supplied to Mali, Burkina Faso, Niger and Chad. Other fuel depots are located in Bouake and Yamoussoukro. In 2008, construction began on a second refinery which is expected to have a capacity of 60,000 bbl/d, also located in Abidjan.

Exports

In 2006 Côte d'Ivoire consumed approximately 26,000 bbl/d of oil, the remaining 36,000 bbl/d were exported. According to the *Global Trade Atlas*, approximately 75 percent of Ivorian oil exports went to Western Europe, with more than half of total exports going to Germany. The remaining exports went to North America, mainly Canada.

Sector Organization

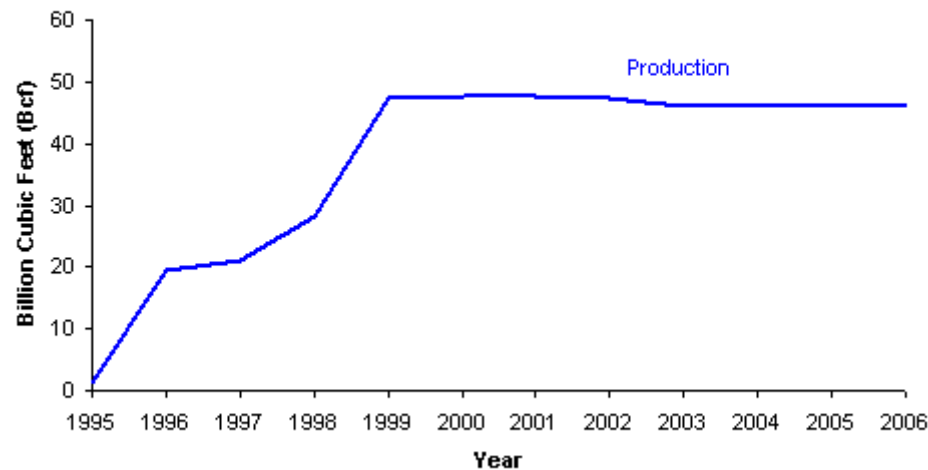
In 1975, Côte d'Ivoire established the Société Nationale d'Operations Pétrolières de la Côte d'Ivoire (Petroci) to oversee the country's oil operations. In 1998, the government re-structured Petroci by dividing it into four entities, which include: Petroci Holding (responsible for portfolio management of the oil sector), Petroci Exploration-Production (responsible for upstream hydrocarbon activities), Petroci-Gaz (responsible for the natural gas sector), and Petroci Industries-Services (responsible for all other related services).

Natural Gas

Côte d'Ivoire primarily uses natural gas as feedstock for electricity production.

According to 2008 estimates by OGJ, Côte d'Ivoire had one trillion cubic feet (Tcf) of proven natural gas reserves. Although exploration teams first discovered natural gas in Côte d'Ivoire in the 1980s, it was not until the mid-1990s that companies began to develop the resource. In 2006, Côte d'Ivoire produced 46 billion cubic feet (Bcf) of natural gas, primarily used for domestic electricity generation.

Côte d'Ivoire's Natural Gas Production, 1994-2006



Source: *International Energy Annual*, 2007

Côte d'Ivoire's largest producing natural gas field is the Foxtrot field in offshore Block CI-27. According to IHS Energy, Foxtrot contains estimated natural gas reserves in place of 950 Bcf. The Block is operated by Foxtrot International (24 percent interest) and partners include Petroci (40 percent), SECI; a member of the Bouygues group of France (24 percent), and Energie de Côte d'Ivoire (Enerci); a joint venture of Gaz de France and EdF Group (12 percent).

Canadian Natural Resources (CNR) operates the Espoir field, which is located offshore in Block CI-26. CNR estimates Espoir's proven natural gas reserves to be 150 billion cubic feet (Bcf). Development of the West Espoir field began in mid-2005, with first production online in July 2006. CNR holds 58.7 percent interest in the block and is joined with partners Tullow Oil (21.3 percent) and Petrosi (20 percent).

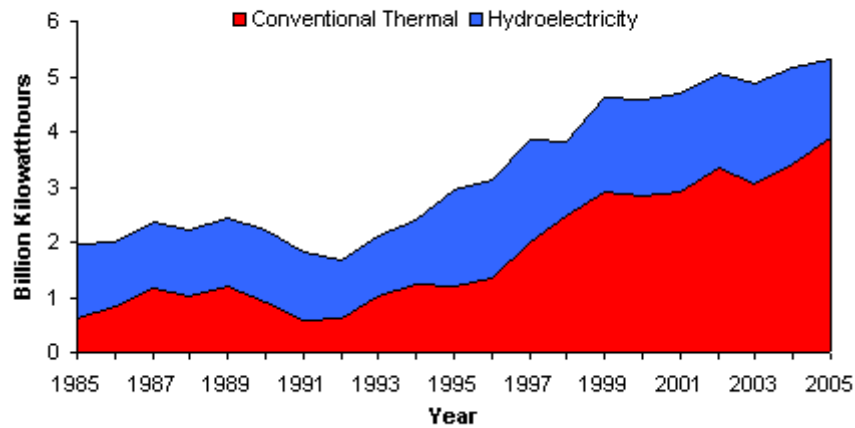
Electricity

The majority of Côte d'Ivoire's electricity is generated through

As of 2005, Côte d'Ivoire had installed electric generation capacity of 1,084 megawatts (MW). In 2005, Côte d'Ivoire generated 5.31 billion kilowatt hours (Bkwh) of electricity, while consuming 2.9 Bkwh. Excess electricity generation is exported through the West African Power Pool (WAPP).

natural gas-powered stations.

The majority of electricity is generated through conventional thermal stations (over 70 percent), with hydroelectricity comprising the remainder. The 288-MW Azito power station, brought online in 1999, is located in Abidjan's suburbs and produces more than a third of the country's power. The phased construction of a third turbine in Azito has been delayed pending a rise in domestic and regional demand for electricity through WAPP. Côte d'Ivoire's main hydroelectric plants include Ayame I and II, Kossou, Taabo, Buyo and Grah.

Côte d'Ivoire's Electricity Generation, by Source, 1985-2005

Source: *International Energy Annual 2007*

Profile

Energy Overview

Proven Oil Reserves (January 1, 2008E)	100 million barrels (Oil and Gas Journal)
Oil Production (2007E)	52 thousand barrels per day
Oil Consumption (2006E)	26 thousand barrels per day
Crude Oil Refining Capacity (2006E)	65.2 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2008E)	1 trillion cubic feet (Oil and Gas Journal)
Natural Gas Production (2006E)	46 billion cubic feet
Natural Gas Consumption (2006E)	46 billion cubic feet
Electricity Installed Capacity (2005E)	1,084 megawatts
Electricity Production (2005E)	5.31 billion kilowatt hours
Electricity Consumption (2005E)	2.9 billion kilowatt hours
Total Energy Consumption (2005E)	0.113 quadrillion Btus*
Total Per Capita Energy Consumption (2004E)	6.6 million Btus
Energy Intensity (2004E)	2,981 Btu per \$2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2005E)	6.4 million metric tons, of which Oil (60%), Natural Gas (40%), Coal (0%)
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Per-Capita, Energy-Related Carbon Dioxide Emissions (2005E) 0.37 metric tons

Carbon Dioxide Intensity (2005E) 0.17 Metric tons per thousand \$2000-PPP**

Oil and Gas Industry

Organization	Petrolières de la Côte d'Ivoire (Petroci) has four operation subsidiaries (Petroci-holding, Petroci-Exploration/Production, Petroci-Gaz, and Petroci-industries/Services)
Foreign Company Involvement	Addax, Canadian Natural Resources, Dana Petroleum, Energy Africa, ENI-Agip, ExxonMobil, Gentry, Gulf Canada, Mondoil, Afren Energy, PanCanadian Petroleum, Pluspetrol, Shell, Santa Fe Snyder, Stratic Energy, Total, Tullow, Vanco Energy
Major Oil Fields	Espoir, Baobab, Lion, Panther
Major Natural Gas Fields	Foxtrot, Kudu, Panther
Major Refineries	Société Ivoirienne de Raffinage (SIR) – Abidjan, Société Multinationale des Bitumes (SMB) – Abidjan

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

Links

U.S. Government

[CIA World Factbook](#)

[Library of Congress - Côte d'Ivoire Country Study](#)

[U.S. State Department Background Notes on Côte d'Ivoire](#)

[U.S. State Department's Consular Information Sheet on Côte d'Ivoire](#)

[U.S. Embassy in Côte d'Ivoire](#)

General Information

[Abidjan Post](#)

[allAfrica News - Côte d'Ivoire](#)

[Columbia University - Côte d'Ivoire information page](#)

[Economic Community of West African States \(ECOWAS\)](#)

[IMF - Côte d'Ivoire Information page](#)

[Mbendi - Côte d'Ivoire Profile](#)

[University of Pennsylvania - Côte d'Ivoire Information page](#)

[Washington Post Côte d'Ivoire page](#)

[World Bank - Côte d'Ivoire Information page](#)

Sources

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Argus Media

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Business Monitor International

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Economist Intelligence Unit Views Wire

Energy Compass

International Energy Agency (IEA)

Factiva

Global Insight

IHS Energy GEPS Reports

International Monetary Fund

International Oil Daily

Oil & Gas Journal

Petroleum Economist

Petroleum Intelligence Weekly
PFC Energy
Platts Oilgram News
Reuters News Wire
UN Development Program (UNDP)
U.S. Energy Information Administration
U.S. Department of State
Washington Post
Weekly Petroleum Argus
World Bank
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